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WORKSHOP SUMMARY

Workshop 21 Biodegradable Metals Moving Towards Clinical Applications

Proposed by: EU–China Biometal Working Group

Workshop Leader



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Workshop Summary

Biodegradable metals have been introduced as a new class of temporary biomaterials in various applications, mainly cardiovascular and musculoskeletal applications. Extensive research progress around the world has been leading to first prototypes. However just a few products are available on the market. It is generally accepted that the current standards for testing these new implants are not appropriate without modification. In the current discussion, it has been found more suitable to create new guidelines for evaluating the biocompatibility of implants made of biodegradable metals. This notion is mainly based on the number of parameters which determines the material corrosion process in a specific application. These parameters are of different importance in-vitro and in-vivo. This symposium is addressing the current discussion on latest developments and standardization in ISO, DIN and ASTM and aims to demonstrate how efforts in standardization and new developments can bring biodegradable metals into clinical use.

Speakers



Speaker 1: Biodegradable metals—past, present and future development in orthopaedics
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Speaker 2: Design concept of Mg-based biometal and its translation for orthopaedic applications
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Speaker 3: The first clinical study using innovative biodegradable magnesium screw for vascularized bone grafting for treating osteonecrosis of the femoral head
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